

THE INSECT PEST SURVEY BULLETIN

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INSECT PEST SURVEY BULLETIN

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OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR SEPTEMBER, 1923

Reports made during September indicate that the Hessian fly is more abundant than usual over the southern third of Indiana and Illinois, and that the situation is also threatening in Missouri and Nebraska.

Heavy rains in Illinois and Missouri reduced the seriousness of the heavy chinch bug infestations. Chinch bugs, however, are more numerous over the greater part of the chinch bug belt, particularly in the northern limits, than last fall.

The European corn borer infestation appears to be increasing in intensity in Ohio.

The garden webworm continues to be destructively abundant in alfalfa in Indiana, Illinois, and Nebraska, being especially serious on new plantings.

The most serious outbreak of the cotton leafworm that has occurred for several years is recorded this year throughout the Cotton Belt. Northern flights of the moths brought them into New England and the Lake Region between September 3 and 15, where some damage was recorded to fruit, by the feeding of the moths.

Of 340 points in the Cotton Belt reporting on the boll weevil situation late in August and early in September, 173 reported serious damage by this pest.

The birch leaf-skeletonizer is again reported as seriously damaging birch trees in Massachusetts, Connecticut, and southern New Hampshire.

Spruce and fir have been seriously defoliated in parts of Idaho, California, and Wyoming by the spruce budworm.

The bee louse has been found well established in Carroll County, Md. This is the first record of this insect being actually established in this country, although it has been repeatedly introduced on imported queenbees.

OUTSTANDING ENTOMOLOGICAL FEATURES FOR CANADA FOR SEPTEMBER, 1923.

The wheat-stem sawfly appears to be still spreading in Manitoba and there is little doubt but that it is present in all the wheat growing areas in the province but only in small numbers in northwestern districts. This insect has not been as prevalent in the crops this year as in 1922, due to cool weather and the parasite Microbracon cephi, which has been found in most of the worst cephus infested areas.

The Hessian fly made no appreciable headway in eastern Canadian Prairies during the past season, despite our expectations of the spring.

The chinch bug shows a greater area of infestation in Saskatchewan than formerly reported. This insect apparently covers an area of 1500 square miles over partially settled prairies with great expanses of unbroken land. The infestation seems to centre at Lacadena, Sask.

The cutworm, Feltia ducens, Wlk. is very plentiful in southern Alberta, and has been by far the most numerous Noctuid taken by traps at Lethbridge.

There has been an extensive outbreak of crickets in southern Manitoba which have caused much inconvenience by their feeding activities on binder twine.

The Colorado potato beetle has been a very great pest in Manitoba this past summer, particularly in mid-northern regions. An increase in this pest has been observed in Saskatchewan.

The green apple bug, Lygus communis, which during the last few years declined in numbers, is now apparently on the upgrade, becoming more numerous again.

The fall webworm has been observed in unusual numbers in southern Manitoba, eastern Ontario, and central and western Quebec. Parasites appear to be abundant.

The larch sawfly defoliated wide areas this summer in Alberta, extending as far west as Edson, but not having as yet reached the B. C. boundary line along the route of the Canadian National Railways.

The birch leaf-skeletonizer is more abundant this year than usual, occurring through Ontario wherever the birch is found growing.

CEREAL AND FORAGE - CROP INSECTS

MISCELLANEOUS FEEDERS

GRASSHOPPERS (Acridiidae)

Wisconsin

A. A. Granovsky (August 26): The northern part of Door County is seriously infested with grasshoppers, the principal species being Camnula pellucida, although other species are present. The loss in crops is from slight to almost complete. The grains, such as barley, oats, wheat, and even rye, suffered badly. Clovers and alfalfa were defoliated at Sturgeon Bay, reducing the value of hay. Melanoplus bivittatus occupies second place in this county. It has been observed that this species prefers lower places with larger grass, especially on the newly broken land. Many specimens of this species were infested with nematodes, as many as 2 to 6 worms being found in some specimens.

S. B. Fracker (September 15): Melanoplus atlanis and Camnula pellucida were much more abundant than usual in most of the State. The severe epidemic of last year in the northeastern counties was not repeated, however. Complaints were received from Adams, Dane, Door, Dunn, Forest, Grant, Iron, Juneau, Marinette, Monroe, Oneida, Washburn, and Wood Counties.



- Georgia W. F. Turner (September 15): Grasshoppers are very abundant (three or four species) all through the middle part of the State. I wonder if the fact that so many fields have been turned out in the past year or two hasn't something to do with this. It is in such abandoned fields, grown up to weeds and much crab grass, that the hoppers are most abundant.
- Nebraska M. H. Swenk (August 15 to September 15): Reports of moderate grasshopper injury from south-central Nebraska, east to Kearney and Thayer Counties, were received during August. Newly sown alfalfa fields in Saline County, and also in York County, were reported injured by grasshoppers during the first two weeks of September.
- Texas O. G. Babcock (August 18): Melanoplus differentialis Thoms. is fairly numerous, but seems to attack only the yucca, eating the margins until the leaves are practically ruined. The center bud or young leaves are not attacked, because the cattle had previously eaten them while young. Oak leaves, other shrubs, and grasses apparently were not attacked, at least while the yucca was present.
- Washington A. L. Melander (September 7): Grasshoppers appear to be less abundant than usual, there being but few complaints where formerly we have had dozens of letters. Everbearing strawberries are reported as being destroyed near Spokane. At Fruitland one correspondent writes: "Early this spring I noticed the tiny hoppers by the millions in the pastures. The hoppers were quite large about the time the pasture was getting pretty bare and I noticed that, wherever the Jim Hill mustard was, they were busy at work. They stayed with that until the seed pods were emptied, when they moved on. The tops of our potatoes were totally demolished, but the tubers were far enough along so that they were not spoiled. They stripped about 3 acres of field corn until just the stalks stand. They have eaten the silk off all the ears of the 10-acre patch and have eaten right down into many of the cobs. They ate the strawberries and vines in a short time, when they settled on the carrots and turnips. Peas, parsnips, and watermelons they do not bother much, but asparagus disappeared as fast as it came up. Onion tops were eaten down and in a few instances they ate down into the onion. When they reached the house they became a terrible pest, eating the flowers in the yard, and even the mosquito bar off the windows."

WHITE GRUBS (Phyllophaga spp.)

- Wisconsin A. A. Granovsky (August 29): White grubs are common in the region about Sturgeon Bay on account of a large acreage of wild, uncultivated land, where the pest is breeding. The injury is variable, owing to the cultural methods used by individual farmers and the newness of land used in cultivation.
- S. B. Fracker (September 15): This insect is apparently absent in the grub stage in the extreme northern counties this year. Elsewhere it is generally distributed in both 1-year and 2-year stages. No heavy losses have occurred.



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WHEAT

HESSIAN FLY (Phytophaga destructor Say)

- Indiana J. J. Davis (Purdue University Insect Notes No. 19): The Hessian fly infestation is not noticeably heavy in wheat stubble in northern Indiana, except in fields sown before the fly-free date last year, but is abundant in the southern third of the State. Counts made by W. H. Larrimer, of the U. S. Entomological Laboratory, show the infestation of stubble in the southern third of the State to be from 8 to 38 per cent, enough to cause a serious infestation in wheat sown before the fly-free date. Because of this infestation it is important that all wheat growers in southern Indiana adhere to the fly-free sowing dates, and it is equally important, if not more so, that the wheat growers of northern Indiana use similar precautions and cooperate in sowing after the fly-free dates in order to maintain the minimum infestation.
- Illinois W. P. Flint (September 13): Abundant rainfall throughout the State has caused a heavy growth of volunteer wheat. Apparently, eggs are being deposited in about normal, or a little more than normal, numbers in northern and southern Illinois, but very much less than normal numbers in the central part of the State, where the fly has been very scarce during the past season.
- Wisconsin A. A. Granovsky (August 29): The Hessian fly was observed, I believe, for the first time in Door County during this year. It was quite destructive in several wheat fields and also attacked rye fields to some extent. It probably has been here for several years, but only this year was damage noticed. (September 15): This pest is not a serious factor in wheat production in this State.
- Minnesota A. G. Ruggles (September 29): The Hessian fly seems to be decidedly on the increase. Last year we found it doing considerable damage in one or two counties, while this year I have had reports from a number of counties, yet no reports on the extent of the damage done. Unfortunately, I have had no time to devote to the problem and have been unable to work out so far the fly-free dates. Practically all of these infested counties so far are in the southern part of the State and are in the region where winter wheat is being grown more and more extensively.
- Missouri A. F. Satterthwait and R. A. Blanchard (September 4): Three fields at Pacific were left uncut because of the Hessian fly and Harmolita tritici combined. Dissection of flaxseeds shows an extremely small per cent of live Hessian fly forms. The majority of puparia were parasitized, while some dead, moldy larvae were found.
- R. A. Blanchard (September 4): Infestation by the Hessian fly, as shown by examination of wheat stubble, is light in the vicinity of Webster Groves. Dissections of flaxseeds showed an extremely small percentage of live Hessian fly forms within the puparia. (September 7): First eggs of the Hessian fly were found September 7. However, upon examination of volunteer plants, several white larvae a week or so old were found.

L. Haseman (September 12): The fly situation continues threatening. Farmers are preparing wheat ground early with rains favoring this work. The Department of Entomology is making a drive on delaying seeding until the fly-free date. We hope to handle threatening outbreaks with the cooperation of our growers. The infestation is less threatening across the central part of the State.

Nebraska

M. H. Swenk (September 1-15): At the Hessian fly observation station, established near Plattsmouth, Cass County, where the examination of 1,600 wheat plants showed an average infestation of 6.6 per plant, the insects began to emerge September 1 and were moving about in the fields in force by September 4. There was a heavy emergence from September 4 to 9, so that by the latter date over 40 per cent of the flaxseeds in the stubble had given up their flies. Egg laying began on September 6, and on September 11, 1,680 eggs were laid on 100 wheat plants. Emergence slowed up after September 9 and cool weather of the last few days has checked activity in the fields, but a heavy wave of emergence is looked for following the next few warm days.

JOINTWORM (Harmolita tritici Fitch)

Wisconsin

A. A. Granovsky (September 15): This pest is rarely injurious in Door County.

Missouri

A. F. Satterthwait and R. A. Blanchard (September 4): Wheat around Pacific is very heavily infested by this pest, in some fields nearly 100 per cent of the shoots being infested. Three fields were left uncut because of the damage done by this pest and Hessian fly together.

A PENTATOMID (Chlorochroa congrua Uhl.)

Washington

A. L. Melander (September 7): Chlorochroa congrua Uhl. was just sent in by one of our former entomology students from Roberts, Idaho, with the following note on habits: "It is ruining about 10 per cent of the wheat crop here. It sticks its piercing mouth parts into the kernel of wheat during the milk stage and feeds, causing it to shrivel. They are very numerous near Mud Lake."

WHEAT SAWFLY BORER (Cephus pygmaeus L.)

New York

G. E. Smith (July 14): This pest is very bad in wheat fields this year in Orleans County and is causing much heavier damage than the Hessian fly.

Wisconsin

A. A. Granovsky (August 28): Practically all fields of wheat in Door County were slightly infested with wheat sawfly borers, but injury was rather slight. All injured plants dried before harvesting and the grain was not filled properly.

CORN

CHINCH BUG (Blissus leucopertus Say)

- Indiana J. J. Davis (September 18): Chinch bugs are now common in all cornfields. The second generation of bugs did very little damage this year, owing to the fact that egg laying for the second generation was late and at the time the eggs hatched and the young bugs began to feed the corn was practically beyond the stage of injury, except in cases where the bugs were very abnormally abundant. There is an abundance of bugs to go over the winter.
- Illinois W. P. Flint (September 13): Heavy rains have occurred, over most of the area infested, during the past two weeks. These rains have greatly retarded the development of the second-brood nymphs. Sufficient numbers have survived the rains, so that there will probably be more adults entering hibernation over most of the infested territory than was the case in the fall of 1922.
- Minnesota A. G. Ruggles (September 29): At Brookpark, in Pine County, the chinch bugs seem to have become established again. They did considerable damage this year to crops in that region. We are putting on a community campaign in that area this fall.
- Missouri L. Haseman (September 12): Since the summer migration of the pest to corn, the situation as regards the chinch bug seems much improved over the State as a whole. The northern part of the State, two-thirds or more, has had plenty of rain, and corn has not suffered from this pest as we feared it would earlier.
- Nebraska M. H. Swenk (September 1-15): Reports from the Harlan County infested area indicate that early in September practically all of the cornfields were more or less infested with the chinch bug. Practically the same report comes from the restricted Saline County infestation, also.
- Oklahoma E. E. Scholl (September 20). The chinch bug situation in the northeastern part of the State is again serious this fall. Where specific instructions were followed last winter in the burning campaigns, bugs are not so numerous. A much more widely extended burning campaign will be inaugurated by this Department some time in October.

CORN EARWORM (Heliothis obsoleta Fab.)

- Florida J. N. Tenhet (September 20): Damage is general over Gadsden County. In many cases 10 per cent or more of string beans are rendered unmarketable by the larvae boring into the pods.
- Wisconsin S. B. Fracker (September 15): This pest is later than usual and damage is slight. It has been reported from Dane, Grant, and Wood Counties.

Missouri L. Haseman (Septemoer 12): This pest has increased abundantly of late. Late field and sweet corn is being seriously damaged by it. The last of August the pest did some damage to growing tips of tobacco as "budworm".

Louisiana T. H. Jones (September 4): We have been making observations on the number of ears injured by the earworm this year in a field of corn (field) at Baton Rouge where small successive plantings have been made. Examinations of the ears on one row of each planting have been made when the corn reached the roasting ear stage. The following are the results of these examinations:

Corn planted.		:	Ears examined.	:	Ears containing earworms or showing evidence of their work.	:	Ears without earworms and showing no injury by them.
March	10	:	July 5	:	30	:	8
	17	:	10	:	18	:	20
April	7	:	23	:	42	:	28
	21	:	27	:	49	:	22
	28	:	31	:	44	:	34
May	5	:	Aug. 3	:	23	:	23
	12	:	10	:	81	:	0
	23	:	20	:	63	:	0
	28	:	25	:	82	:	0
June	2	:	27	:	62	:	1

New Mexico R. Middlebrook (Septemoer 13): The corn earworm has done about 5 per cent damage to the cotton and about 10 per cent damage to the corn, the heaviest damage to the corn being in the sweet corn.

SUGAR-CANE BORER (*Diatraea saccharalis* Fab.)

Louisiana T. H. Jones (September 4): We have been making observations on the number of stalks injured by the "borer" this year in a field of corn at Baton Rouge where small successive plantings have been made. Examinations of the stalks in one row of each planting have been made at the time the ears reached the roasting ear stage. The following are the results of the examinations:

Corn planted.		:	Stalks examined.	:	Stalks containing larvae or pupae or showing injury by larvae.	:	Stalks without larvae or pupae and showing no injury by larvae.
March	10	:	July 5	:	7	:	34
	17	:	10	:	21	:	25
April	7	:	23	:	59	:	23
	21	:	27	:	61	:	29
May	5	:	Aug. 3	:	25	:	47
	12	:	10	:	44	:	34
	23	:	20	:	57	:	19
	28	:	25	:	86	:	1
June	2	:	27	:	81	:	2



Texas T. C. Barber (August 20): The sugar-cane borer has been reported from several localities as causing considerable damage to the second crop of broom corn. The first cutting was scarcely affected, but a great number of stems have been bored in the second cutting, causing considerable breaking off by the wind.

New Mexico R. Middlebrook (September 13): The loss in the corn crop this year in the eastern half of the State caused by the larger corn stalk-borer, saccharalis or zeacolella, is estimated at 30 per cent. This has become a very serious problem with us since we can not practice fall plowing because of the danger of the land blowing away and we cannot rotate.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Ohio H. A. Gossard (September 18): Considerable increase in the degree of infestation by this pest has been noted during the past month in the infested territory. Two fields have been observed which yielded as high as 10 per cent of the stalks infested. No definite indication has yet been found that the insect will be two-brooded this season under Ohio conditions.

YELLOW-BEAR CATERPILLAR (Diacrisia virginica Fab.)

Washington A. L. Melander (September 7): Yellow-bear caterpillars have recently been sent from Seattle as injuring a field of sweet corn. According to G. T. Wallstedt, who furnished the specimens, "The caterpillars eat off the silk and sometimes part of the young tips of the ear. Usually when the silk is eaten off they migrate to another ear." This is a new record with us.

CORN-SILK BEETLE (Luperodes varicornis Lec.)

Alabama W. E. Hinds (August 28): The corn-silk beetle has been reported from several localities this season. Especially serious damage was done in Tuscaloosa County.

BELTED CUCUMBER-BEETLE (Diabrotica balteata Lec.)

Louisiana Bureau of Entomology Monthly News Letter No. 112: C. E. Smith reports that considerable injury has been done to corn in Louisiana by the belted cucumber-beetle. This insect, in destroying the silk of the corn ear, has retarded pollination, and in some fields a large number of poorly developed ears were noted. Similar injury has previously been noted as being caused by the beetle of the western corn rootworm, Diabrotica longicornis Say, but this is the first instance in which such injury has been found to be due to the attack of D. balteata.

CORN-LEAF APHID (Aphis maidis Fitch)

Nebraska M. H. Swenk (August 15-31): During the third week in August there was a report of such an abundance of the corn-leaf aphid in a Saline County field that the plants showed evident stunting and injury.

ALFALFA AND CLOVER

FALL ARMYWORM (Larhygma frugiperda S. & A.)

New Mexico R. Middlebrook (September 13): The fall armyworm is reported as present in Estancia Valley.

COTTON CUTWORM (Prodenia ornithogalli Guen.)

Nebraska M. H. Swenk (September 1-15): Toward the middle of the month enough individuals of the cotton cutworm occurred in alfalfa fields in this district to confuse some farmers as to the real cause of the consuming and webbing of the leaves in some of the old alfalfa fields.

GARDEN WEBWORM (Loxostege similalis Guen.)

Indiana J. J. Davis (September 16): One report of injury to young alfalfa by the alfalfa webworm was received from the extreme northern end of the State, Elkhart County, August 26.

Illinois W. P. Flint (September 13): The garden webworm is attacking alfalfa. This insect has been abundant throughout western Illinois, where it has destroyed many new plantings of alfalfa seeded during August, 1923. It has not been sufficiently abundant to cause any damage to older fields.

Missouri L. Haseman (September 19): This pest has matured its summer brood. Moths were abundant on wing September 1.

Nebraska M. H. Swenk (August 15-31): As a result of the great abundance of moths of the garden webworm, which were flying during August, report of injury to the third cutting of alfalfa, and especially of injury to fields of young alfalfa sown late in July or early in August, by the third brood of webworms, began to be received August 21 and have continued until the present writing. The reports to date have come from Otce, Gage, Lancaster, Seward, York, Adams, and, during the last few days in August, from Boone and Pierce Counties. Many of the webworms are yet small, so that very likely injury will continue for several days into September. (September 1-15): Injury to alfalfa by the garden webworm continued through the first week in September. Reports came during this period chiefly from Antelope and Boone Counties, but also from Knox County to the north and from Nance and Merrick Counties to the south, these counties forming a line along the 96th Meridian north of the Platte River in this State. In nearly every case it was recently sown alfalfa that was most damaged.

FRUIT INSECTS

APPLE .

APPLE-GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

Wisconsin A. A. Granovsky (August 17): In Door County this insect is reported as quite common. (August 26): In the early spring of this year the apple bad aphid appeared in great numbers infesting buds of the apple trees and especially flowering clusters at Sturgeon Bay. Large colonies were present on leaf petioles and calyxes of the flowers. Later this species was observed on oat plants in the fields.

CODLING MOTH (Carpocapsa pomonella L.)

Massachusetts A. I. Bourne (September 25): A report from eastern Middlesex County the early part of the month stated that the second brood of codling moth and late curculio work were beginning to show up at that time very badly in maturing apples.

Missouri L. Haseman (September 12): Unsprayed fruit is almost a complete loss from worms and diseases. Second-brood worms appeared late but are maturing off now at this date, with no serious signs yet of the third brood of "pin worms" in central Missouri.

New Mexico R. Middlebrook (September 13): The codling moth has caused 10 to 20 per cent of rejections in apples at the packing plants.

California T. D. Urbahns (September 13): The codling moth was kept well under control in orchards properly sprayed in the Beaumont apple district. Some of these orchards showed less than 2 per cent of wormy fruit, while some of the poorly sprayed orchards show a heavy infestation. Larvae were rapidly going into hibernating quarters.

RED-HUMPED CATERFILLAR (Schizura concinna S. & A.)

New Hampshire P. R. Lorry (September 9): At North Stafford there is a small infestation of this insect on apple.

New York G. E. Smith (August 18): In Orleans County this insect is present in two young orchards.

Ohio H. A. Gossard (September 18): This insect was received from Cambridge and Ravenna, attacking apple.

APPLE AND THORN SKELETONIZER (Hemiphysalis pariana Clerck)

Massachusetts A. I. Bourne (September 25): The apple and thorn skeletonizer seems to be increasing badly throughout the Connecticut Valley region at least, and, while this last brood has not turned out to be quite as bad as was anticipated from the evidence we had of the second brood in August, yet isolated trees or those which have not received pretty careful spraying are very badly browned. This insect has spread in numbers enough to be a serious pest from the Connecticut Valley region at least as far east as Worcester County, where reports from the County Extension Service state that in many sections of the county the insect can be found and, apparently, it is very generally distributed over that region, although the county agent stated that damage to individual trees is not very heavy. Of course, in well-sprayed orchards, as would be expected, there is very little evidence of injury from this insect, although in most cases, at least, traces of its work can be found. I was able to personally observe the presence of this species in northeastern Essex County, which would seem to indicate that although not yet in large numbers the pest has spread clear across the State, and we can probably look for increased abundance throughout the State, as a whole, another year.

Connecticut W. E. Britton (September 24): This insect now shows all over the State.

LESSER APPLE WORM (Laspeyresia prunivora Walsh)

Pennsylvania S. W. Frost and E. M. Craighead (September 15): The lesser apple worm is more abundant than noticed before. Together with the leaf-roller Eulia velutinana Walk., it is causing considerable late injury to the fruit.

A TORTRICID (Amorbia humerosana Clem.)

Pennsylvania S. W. Frost (September 13): The leaf-roller Amorbia humerosana Clem. is exceedingly abundant this summer in some orchards in York and Cumberland Counties. Summer Rambo showed as high as 25 per cent injury.

HAG MOTH (Phobetrus pithecius S. & A.)

Ohio H. A. Gossard (September 18): The hag moth larva was received from Utica, August 28, taken in a dwelling house, and on September 25 from Negley on apple.

GREEN FRUITWORM (Xylina antennata Walk.)

New York R. G. Palmer (June 23): In Monroe County, slight damage is being done by this pest to fruit in apple orchards, but in well sprayed orchards good control has been secured.

H. W. Fitch (June 23): In Wayne County this insect is reported working on apples, peaches, and prunes.

P. J. Chapman (June 23): This insect is doing considerable damage to apple and pear in Wyoming County.

E. W. Pierce (July 20): We found this insect in the pupal stage during the month in Ontario County.

Missouri

A. C. Burrill (August 25): Occasional holes in apples apparently due to one of the green fruitworms were noted in the Jim Hayes orchards on August 3 and 9, 1923.

FALL WEBWORM (Hyphantria cunea Drury)

New Hampshire

P. R. Lowry (August 30): The fall webworm is common in Durham on wild cherry, apple, elm, plum, hickory, white oak, birch, and ash. Eggs hatched July 14.

Massachusetts

A. I. Bourne (September 25): The fall webworm has turned out to be slightly more abundant than last year. At this time the larvae are beginning to mature and leave the webs. Mr. Jenks, of West Acton, reports that in his section this pest seems to be unusually abundant. These are the outstanding pests which are facing us at the present time.

Connecticut

B. H. Walden (August 31): Old apple orchards and roadsides are badly infested in Windham, Tolland, and New London Counties.

New York

R. F. Illig (August 9): In Wayne County nests were reported found.

Ohio

E. W. Mendenhall (September 17): The fall webworm is doing considerable damage in apple blocks in nurseries in southwestern Ohio.

New Mexico

R. Middlebrook (September 13): The fall webworm is present but doing little damage in the southern half of the State.

ROSE LEAFHOPPER (Empoa rosae L.)

Pennsylvania

S. W. Frost (September 13): The leafhopper, Empoa rosae L., has been exceedingly injurious this summer. Not only do the leaves show serious injury, becoming almost white in cases, but the fruit shows injury. In many places the fruit is materially spoiled in appearance by the droplets of liquid discharged by the hoppers. The green varieties seem to suffer the most.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Ohio

H. A. Gossard (September 18): The San Jose scale was received August 21 from Hibbith on peach.

- Indiana B. A. Porter (September 21): The San Jose scale has continued to do serious damage at Vincennes. The injury to peach in some instances is fully as severe as that to apple. In some peach orchards many dying branches are in evidence. Crawling young are still abundant.
- Illinois W. P. Flint (September 13): The present season on the whole has been favorable to the growth of this scale, but not as favorable as the two previous seasons. Scale is still abundant in the southern part of the State, and it will require careful spraying in all commercial orchards in that section to keep down the insect the coming year.
- Wisconsin S. B. Fracker (September 15): This is a new location (Union Grove) for this pest. The scale is generally distributed throughout the village.
- Missouri L. Haseman (September 12): The pest has bred abundantly again this summer. Where spraying of orchards was not thorough some fruit is badly blotched by it. A drive is planned for the fall and winter to encourage the use of dormant sprays.

FLAT-HEADED APPLE-TREE BORER (Chrysobothris femorata Oliv.)

- Ohio H. A. Gossard (September 18): Larvae of Chrysobothris femorata Oliv. were brought to us from Canton September 10, where they were reported to have killed a few sugar maples and injured a great number which had been transplanted into the cemetery at Canton in the spring. All these transplanted maples were threatened with destruction. The insects were supposed to have come from an old neglected apple orchard nearby.

EUROPEAN RED SPIDER (Paratetranychus pilosus C. & F.)

- Massachusetts A. I. Bourne (September 25): In some orchards, especially on Baldwins, the European red spider is doing considerable bronzing of the foliage. From my own observation I should judge that it has now spread very generally throughout the northern and northeastern parts of the State, at least, I find several severe cases of its bronzing on Baldwins in orchards in West Newbury, which is in the very upper northeastern corner of Essex County.
- Ohio H. A. Gossard (September 18): The European red spider continues to be seen in northern Ohio orchards but is not so numerous as it was 3 weeks ago. Dormant sprays of miscible oils seem to have given fairly satisfactory results in controlling this species.

PEAR

PEAR SLUG (Caliroa cerasi L.)

- Ohio H. A. Gossard (September 18): The pear slug came from Marion, North Olmsted, and Cleveland on pear.

PEACH

PEACH BORER (Aegeria exitiosa Say)

Georgia O. I. Sharp (September 18): Increased interest is shown in the use of paradichlorobenzene for peach borer control at Fort Valley. Practically all the commercial peach growers in Georgia will use the material this year. Present indications point to the use of 500,000 pounds this fall in the Southeastern States. Georgia peach growers obtained very satisfactory results with the material last year, when 250,000 pounds were used.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

South J. A. Berly (August 28): At Clemson College considerable damage
Carolina was done to a portion of the orchard before this insect was checked.

Ohio H. A. Gossard (September 18): This insect was received from West Unity attacking cherry August 21, and from Hibbith attacking peach.

SNOWY TREE-CRICKET (Oecanthus niveus DeG.)

California T. D. Urbahns (September 3): This insect appeared in abundance on cling peaches about two weeks before the fruit was ready to pick and feeding upon the fruit made punctures about 1/4 inch across and as deep. About 90 per cent of the punctures became infected with brown rot, Sclerotinia fructigena, and out of a crop of 425 tons about 100 tons were lost from this injury.

GREEN SOLDIER-BUG (Nezara nilaris Fitch)

Ohio H. A. Gossard (September 18): The green soldier-bug was received from Willoughby, August 28, damaging peach. It was noted at Waterville, September 6, injuring peach. In a large peach orchard at Waterville the commercial damage was probably not more than 1 to 2 per cent over the orchard as a whole, but individual trees could be found where the commercial damage would reach 15 to 20 per cent and where at least 50 per cent of the peaches had been punctured and disfigured in all degrees, from slight to severe. Both the nymphal and adult forms were observed to be still active and puncturing peaches September 6. They have also done more damage in the vicinity of Fort Clinton than for several years.

G. A. Runner (September 20): The green soldier-bug has caused considerable loss in many commercial peach orchards in the northern part of the State. Work of the insect has been noted in nearly all of the counties bordering on Lake Erie. In several orchards examined in Lorain, Erie, and Ottawa Counties, some of the trees showed a high percentage of deformed and unsalable fruit. In fruit packing houses in Ottawa County many of the cull peaches showed characteristic feeding marks of the soldier bug.

SILVER LEAF MITE (Phyllocoptes cornutus Banks)

Pennsylvania S. W. Frost (September 13): The silver leaf mite Phyllocoptes cornutus Banks has been found abundant in some orchards in Adams County. Heretofore, this species was found only in small numbers.

PEACH-TWIG MOTH (Anarsia lineatella Zell.)

Delaware C. O. Houghton (September 15): Dead terminals, due to injury by this species, are very common on peach in Newark.

ORIENTAL PEACH MOTH (Laspeyresia molesta Busck)

Connecticut W. E. Britton (September 24): This insect was abundant in twigs of peach trees in Greenwich in June. Now the larvae are in the fruit as far east as New Haven.

Pennsylvania S. W. Frost and E. M. Craighead (September 13): The oriental peach moth is exceedingly abundant this summer on peach, although it has also been found on apple. In the vicinity of Collegeville, Pa., nearly 60 per cent of the late peaches are injured by this pest. About 25 per cent of the early crop showed injury.

CERRY

PEAR AND CHERRY SLUG (Caliroa cerasi L.)

Wisconsin A. A. Granovsky (August 17): This slug is very common in local spots in Door County.

PLUM

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia Oliver I. Snapp (September 18): There will be practically no second brood of the plum curculio in Fort Valley, Ga., this year. To date only one adult of the second generation has been reared, and only four larvae of the second brood have reached maturity. This shows a great variation in the life history of this insect in the South, as for some reason there are two full generations. Last year a third generation was reached in the insectary. Climatic conditions are perhaps the factors which determine the size of the second brood here.

Wisconsin S. B. Fracker (September 15): This year's abundant apple crop shows considerably less curculio injury than usual.

GREEN PEACH APHID (Myzus persicae Sulz.)

New York R. F. Illig (July 7): This aphid is found generally throughout Wayne County.

H. W. Fitch (July 7): In Wayne County this insect is becoming abundant in prune orchards.

R. G. Palmer (July 15): In Monroe County this insect is quite common.

COTTON RED SPIDER (Tetranychus telarius L.)

California T. D. Urbahn (September 20): This mite has been unusually abundant in many prune orchards this year, especially in the Sacramento Valley. Many trees were completely defoliated in spite of the efforts of fruit growers to control the pest by spraying. The presence of dense webs and the folding of leaves interfered with applying insecticides.

RASPBERRY

RASPBERRY CANE-BORER (Oberea bimaculata Oliv.)

Ohio H. A. Gossard (September 18): This borer has been reported from Akron, Ohio, attacking raspberries.

GRAPE

GRAPE TUBE GALL (Cecidomyia viticola O.S.)

Ohio H. A. Gossard (September 18): The grape tube gall was received from Ottawa where it was attacking grape.

GRAPE PHYLLOXERA (Phylloxera vitifoliae Fitch)

Ohio H. A. Gossard (September 18): Phylloxera vitifoliae came from Mesopotamia September 8.

ROSE CHAFER (Macrodactylus subspinosus Fab.)

New York C. C. Wagoner (June 30): The rose chafer is still being held in check with an excess of lime spray in Ulster County.

C. E. Smith (June 30): This insect has been unusually abundant and destructive on apples and peaches in a large number of orchards in Orleans County.

R. G. Palmer (July 15): The rose chafer is severe this year, doing considerable damage to apples and peaches in Monroe County.

E. W. Pierce (June 30): This pest was found abundant in one cherry orchard in Ontario County.

F. H. Bond (June, 1923): We found grape, apple, and cherry in two orchards in Oswego County infested by this insect. They were cleaning up fruit and foliage. An arsenate-molasses spray seemed to check them and a few dead ones could be found.

GRAPE LEAFHOPPER (Erythroneura comes Say)

Delaware C. O. Houghton (September 20): These leafhoppers have caused considerable damage here this season and are still very abundant on the vines.

GRAPE-BERRY MOTH (Polychrosis viteana Clem.)

Delaware C. O. Houghton (September): A considerable amount of injury by this species has been noticed at Newark this year.

PECAN

PECAN SHUCKWORM (Laspeyresia caryana Fitch)

Alabama W. E. Hinds (August 28): The pecan shuckworm seems to be unusually abundant and is now causing the dropping of healthy grown pecans.

REGAL MOTH (Citheronia regalis Fab.)

Georgia O. I. Snapp (September 16): Larvae of the regal moth were noted on this date feeding on pecan. Each fall these large larvae are brought to the laboratory by alarmed pecan growers.

FALL WEBWORM (Hyphantria cunea Drury)

Florida Jeff Chaffin (September 10): The fall webworm is very abundant this year in practically every pecan grove in the State.

FULLER'S ROSE BEETLE (Pantomorus fulleri Horn)

Georgia W. F. Turner (September 12): Weevils are very abundant on pecan foliage in two or three groves at Barnesville. They are mostly grouped in clusters of from 6 to 10. There is some feeding on the leaves, but this is not serious. I never have seen this insect so abundant.

T R U C K - C R O P I N S E C T S

MISCELLANEOUS FEEDERS

BLISTER BEETLES (Meloidae)

Wisconsin S. B. Fracker (September 15): Epicauta vittata is reported as causing severe local injury to potatoes in Green Lake and Washington Counties.

Louisiana J. W. Ingram (August 27): A number of fields of soy beans in the vicinity of Crowley were almost completely defoliated by the striped blister beetles during the month of August.

PEPPER WEEVIL (Anthonomus eugenii Cano)

New Mexico W. E. Emery (September 12): This insect attacked the Chili pepper crop in the locality of Mesilla Park last year, doing at least 50 per cent damage to the fruits. There are none noticeable this year, due to some unknown reason.

A WEEVIL (Listronotus latiusculus Boh.)

Illinois W. P. Flint (September 13): A weevil, probably Listronotus latiusculus, has been generally destructive to carrots in two of the south-central counties. Adults have not yet been obtained but larvae and pupae have been identified by Dr. Chittenden as probably of this species. In the area mentioned there is a general destruction of carrots in gardens.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

New York R. F. Illig (August 16): This pest can be found in almost every potato patch in Wayne County.

Wisconsin A. A. Granovsky (August 18): This spring early potatoes were quite seriously injured in Door County by this pest, while later potatoes escaped serious damage, the average damage being moderate. At present all larvae have disappeared, and only an occasional adult beetle is present.

S. B. Fracker (September 15): This pest is slightly less destructive than in 1921 and 1922.

WHITE GRUBS (Phyllonhaga spp.)

New York A. D. Davies (August 18): Have a very serious outbreak of white grubs near Gravesville, practically destroying the meadows and potatoes on two farms. As many as 23 grubs have been found in one hill of potatoes and practically all potatoes are eaten so severely that they are worthless.

POTATO APHID (Macrosiphum solanifolii Ashm.)

Wisconsin S. B. Fracker (September 19): Distribution of this pest is widespread but there is little or no direct injury, although the insect may be responsible for the general spread of potato mosaic. Seen in Door, Langlade, Oneida, Forest, Waupaca, and Portage Counties.

GREEN PEACH APHID (Myzus persicae Sulz.)

Wisconsin A. A. Granovsky (August 17): This pest is more abundant than Macrosiphum solanifolii in Door County.

POTATO LEAFHOPPER (Empoasca mali LeB.)

New York E. W. Pierce (August 18): This pest can be found in most fields of potatoes in Ontario County and hopperburn injury is quite evident.

K. E. Paine (August 18): This pest is causing considerable injury in Chautauqua County.

Wisconsin S. B. Fracker (September 15): This insect caused less injury this year than at any time since 1917. In the southern counties potatoes remained green until the middle of August, one month later than last year. There was some damage in commercial districts of the northern sections but less than usual.

NORTHERN TOBACCO HORNWORM (Phlegethontius quinquemaculata Haw.)

Wisconsin S. B. Fracker (September 15): This pest is injurious in a few fields in Dunn, Waupaca, and probably other counties.

CABBAGE

IMPORTED CABBAGEWORM (Pontia rapae L.)

New York R. F. Illig (August 8): Over the whole of Wayne County. (August 16): The imported cabbageworm is present in 90 per cent of the plantings at Sodus.

Wisconsin A. A. Granovsky (August 26): Among other cabbage insects the most injurious this year was the imported cabbageworm. In many gardens the cabbage leaves were completely stripped. This is probably the most important cabbage pest we have in the part of the State around Sturgeon Bay.

CABBAGE APHID (Brevicoryne brassicae L.)

New York W. D. Mills (August 18): One field of cabbage in Nassau County was found infested with the cabbage aphid early this week.

Wisconsin A. A. Granovsky (August 26): Next in importance after the imported cabbageworm is the cabbage aphid in this region (Sturgeon Bay) on cruciferous crops, especially cabbage. It is quite common in all gardens, doing considerable damage to the plants, although that damage is not conspicuous as is the case with many aphids.

HARLEQUIN CABBAGE BUG (Murgantia histrionica Hahn)

New Mexico R. Middlebrook (September 13): The Harlequin cabbage bug has caused a loss of approximately 10 per cent in this State.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Delaware C. O. Houghton (September 20): This species is now to be found in winter quarters at Newark. An unusual amount of injury has occurred here this year.

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

Virginia Neale F. Howard (September 10): This pest was found at Clinchfield, in Russell County.

Georgia Neale F. Howard (September 10): This pest was first reported in 1921 from Thomas County, but very little spread occurred that year and in 1922. Mr. Luther Brown, of the Georgia State Board of Entomology, reports under date of August 31 an area of 250 to 300 square miles infested, as compared with 16 square miles last year. The beetle is close to the Florida line in the direction of Monticello.

Tennessee Neale F. Howard (September 10): Found one mile south of Jonesboro, in Washington County.

Alabama W. E. Hinds (August 28): The Mexican bean beetle has been found outside of the Experiment Station grounds near Auburn, in Lee County.

Mississippi R. W. Harned (September 26): Although considerable scouting has been done in practically every county in this State, the Mexican bean beetle has thus far been found in only two counties, Tishomingo and Itawamba, in the northeastern corner of the State. Seven infested properties have been found in Tishomingo County and six infested properties in Itawamba County. No infestation has been found more than 7 miles from the Alabama line. The northernmost point at which the beetle has been found in Mississippi is at Tishomingo or, rather, 4 miles south of Tishomingo, in Tishomingo County, while the southernmost point at which this insect has been found is at Tremont, in Itawamba County.

Ohio H. A. Gossard (September 18): A. E. Miller, of my staff, during the first week in September scouted through Jackson County and found mature larvae of this pest immediately south of Coalton. A batch of eggs was found on the Oak Hill pike immediately south of Clay. Characteristic evidence of feeding was found at several points on the Jackson-Melliston pike in the vicinity of Roads, P. O. All stages of the insect were found

in Gallia County about 2 miles north of Gallipolis. Evidence of feeding was found between Gallipolis and Cheshire. He has since that time found the beetles at Summithill and at Newingsburg in Ross County.

New Mexico R. Middlebrook (September 13): The harm from the bean beetle in the southern section of the State has been very small in comparison with former years and the total estimated loss does not exceed 10 per cent. The fall string bean crop is well on its way and there will be little or no damage by the bean beetle this year. (September 23): The fall string bean crop is well under way and there is no appreciable damage in the southern half of the State. Crop off soon before injury can take place. Pintos slightly damaged.

SOUTHERN GREEN PLANT-BUG (Nezara viridula L.)

Louisiana T. H. Jones (August 25): Adults were sent in by county agent from Grant Parish with a letter stating that this bug was "doing quite a bit of damage to peas, beans, and other field and vegetable crops in Grant Parish."

Florida J. N. Tenhet (September 19): Pods and vines of string beans severely damaged in several fields at Quincy. In one small field, under tobacco shade, about 50 per cent of the vines were killed outright.

GREEN SOLDIER BUG (Nezara hiliaris Fitch)

Michigan Eugenia McDaniel (August 18): The green soldier bug, Acrosternum hilaris, has been received this morning from Cass County where it is said to be attacking beans in the field. They puncture the young pods and are causing considerable injury.

LESSER CORN STALK-BORER (Elasmopalpus lignosellus Zell.)

South Carolina J. A. Berly (August 28): This insect has been reported as attacking snap beans and specimens were received from Sumter and Anderson Counties.

PEAS

PEA APHID (Ulinote pisi Kalt.)

Wisconsin A. A. Granovsky (August 29): The pea aphid at Sturgeon Bay this year was very common on late field peas and canning peas, while early varieties of peas escaped the injury. Such varieties as Rustler, Double Alaska, and Pidgegreel Alaska matured early and were but little injured or escaped the injury, while late varieties were badly infested with this insect.



S. B. Fracker (September 15): This pest is present and injurious in all commercial pea-growing sections. It is reported from Columbia, Dodge, Door, Oconto, Washington, and Winnebago Counties.

PEA MOTH (Sezasia nigricana Steph.)

Wisconsin A. A. Granovsky (August 29): The pea moth injury varied considerably with the variety of the peas grown. The early varieties such as Rustler and Double Alaska were very little affected, if any, while later varieties suffered considerably. This pest was present in every pea field about Sturgeon Bay.

CUCUMBER

STRIPED CUCUMBER-BEETLE (Diabrotica vittata Fab.)

Wisconsin A. A. Granovsky (August 29): This pest is very common on cucumbers, squashes, etc., around Sturgeon Bay. It is perhaps the most destructive insect on cucumbers, injuring and sometimes completely destroying garden cucumbers, especially of early planting.

PICKLEWORM (Diaphania nitidalis Cramer)

Missouri L. Haseman (September 12): This pest is doing damage now in central Missouri. It destroyed commercial cantaloupe crop in southeastern Missouri last month.

MELONS

STRIPED CUCUMBER-BEETLE (Diabrotica vittata Fab.)

New Mexico R. Middlebrook (August 31): About 25 per cent of the melon crop was replanted. This pest is becoming more abundant each year.

MELON APHID (Aphis gossypii Clov.)

Maine E. M. Patch (September 24): Locally very numerous in Cumberland and York Counties in August and September on cucumbers and squashes.

A CUCUMBER-BEETLE (Diabrotica trilineata Say)

New Mexico R. Middlebrook (September 13): This pest did considerable damage, estimated loosely at 20 per cent, to watermelon and cantaloupe crops in the eastern half of the State, but we have no way of telling the financial loss since there has been such a poor market for watermelons that many of them have not been gathered from the fields.

SQUASH

SQUASH LADY-BEETLE (Epilachna borealis Fab.)

Maryland W. H. White (September 15): Defoliating a small acreage of squash at College Park and Silver Spring.

Virginia W. H. White (September 15): This insect is reported from Arlington as completely defoliating one-fourth of an acre of squash.

ONION

ONION THRIPS (Thrips tabaci L.)

Ohio H. A. Gossard (September 18): Thrips tabaci L. appeared in destructive numbers in onion fields on much land in the western part of the State in late July and early August following extended drought. Crop yields were seriously impaired in some fields, the onions being killed when the boles were no larger than pickling size. Nicotine sulphate applied with a power sprayer was found to give partial success in controlling the outbreak, but heavy rains did more good.

Michigan Eugenia McDaniel (August 18): The onion thrips has been reported from a Michigan onion field at Charlotte, where a good percentage of the crop has been destroyed.

SWEET POTATO

SWEET-POTATO WEEVIL (Cylas formicarius Fab.)

Florida and Georgia Bureau of Entomology Monthly News Letter No. 112. The summer inspection for the sweet-potato weevil in Baker County, Fla., and Charlton County, Ga., has just been finished and the present findings indicate that very successful progress has been made in this work. More complete results will be obtained during fall inspection but the weevil has, apparently, been eradicated in the worst danger centers and it is expected that no unusual difficulty will be experienced in cleaning up the remaining infestations.

Mississippi K. L. Cockerham (August 28): The sweet-potato crop of southern Mississippi has been damaged by the continuous rains which have prevailed during the entire summer. If the heavy and constant rains continue during September and early October the sweet-potato crop in the lowlands around the bayous and rivers will probably sour and rot in the fields before harvest; this rotting in the fields will materially reduce the sweet-potato weevil infestation, as both adult and larval stages perish in decomposed potatoes. The smaller amount of potatoes stored during the winter will also reduce the food supply of overwintering weevils.

BLACK-LEGGED TORTOISE-BEETLE (Jonthonota nigripes Oliv.)

New Mexico R. Middlebrook (August 26): This is the first year that they have been sufficient to attract much notice in Dona Ana County. I do not believe they have done any appreciable damage although some farmers claim a loss.



SOUTHERN FIELD - CROP INSECTS

COTTON

COTTON BOLL WEEVIL (Anthonomus grandis Boh.)

Weather, Crops and Markets, Vol. 4, No. 10 (September 8): The cotton crop is forecast at 10,788,000 bales on a basis of condition reports averaging 54.1 per cent normal for August 25. The prospective yield indicated from this condition figure is 134.8 pounds per acre, but the final yield may be more or less, according to developments in condition more or less favorable than average. The indicated production is larger than last year and than two years ago, but much smaller than the pre-war average and somewhat smaller than the average during the war period. Both insect damage and unfavorable weather contributed to the heavy reduction in condition during August.

General Statement

B. R. Coad: Observations on the seriousness of boll weevil infestation throughout the cotton belt during August and early September seem to indicate that the heaviest damage is occurring in the Carolinas, Alabama, and Mississippi while heavy damage is also reported from Louisiana, Arkansas, Tennessee, and Georgia. Of 340 different towns in the cotton belt from which reports have been received, 50 per cent report that boll weevil damage is heavy.

Virginia

Herbert Spencer (September 15): This morning the County Agent of Norfolk County brought in to the experiment station specimens of the cotton boll weevil. These were taken at the town of Portlock, about three miles south of Norfolk. Larvae were abundant in all the blighted squares and small bolls.

Alabama

W. E. Hinds (August 28): The boll weevil is causing much more damage in the Southern States than has occurred in recent years.

Oklahoma

E. E. Scholl (September 20): Recent rains came too late to add to the production of cotton but a lot of squares and fresh foliage will be produced to enlarge the fall brood of boll weevils. Weevils are not so numerous, however, at this time of year as they were last year at the same time. An extended weevil campaign is now being started by this institution.

COTTON LEAFWORM (Alabama argillacea Hbn.)

Massachusetts

T. H. Jones (The Pawtucket Times, Pawtucket, R. I., September 12): A cloud of moths of an unclassified variety swept down on the City of North Adams, Mass., Monday and remained all day. Show windows, windshields of automobiles and everything of a like nature were covered. Monday night they swarmed so thickly around the electric arc lamps that the lights almost cast a shadow. Where the moths came from nobody knows. Last year about the same time they made an appearance and remained until the first frost killed them.

- Rhode Island T. H. Jones (September 13): Yesterday afternoon I was rather interested to see moths of the cotton caterpillar in some numbers on the outside of show windows and elsewhere about the streets near the railroad station in Providence. I do not believe they were there on the 11th or I would have noticed them.
- Maryland J. A. Hyslop (September 11): Hundreds of moths are in my melon patch at Avenel. Clusters of 8 and 10 on a single melon, working in large gouged-out areas on the fruit extending completely to the seed cavity in some cases; these were probably made by poultry.
- Georgia W. F. Turner (September 5): Find scattered larvae one-half to three-fourths grown and more numerous young larvae in most fields at Snellman. No appreciable injury as yet. (September 16): Many fields stripped around the Valley and Perry. Did not see any signs three weeks ago. This insect came into northern Georgia several weeks before it got to middle Georgia this year.
- B. R. Coad (September 7): The leafworm is reported as having damaged cotton considerably in Tifton County.
- O. I. Snapp (September 7): The cotton worm was prevalent in practically every cotton field on this date in the vicinity of Perry, and was doing considerable damage in some fields. (September 17): A cotton field of about 40 acres was almost completely defoliated by the cotton worm near Fort Valley. This insect is more abundant here this year than usual, and is doing considerable damage.
- Ohio G. A. Runner (September 12): Moths of the cotton leafworm appeared in large numbers at Sandusky and on the Lake Erie Islands during the first week in September. Numerous reports were received of injury to ripened fruit in the Ottawa County peach district.
- H. A. Gossard (September 13): The cotton moth came to the peach districts of northern Ohio in a noteworthy flight September 3, 4, and 5. They settled upon the peach orchards of Catawba Island and along the southern Lake shore, causing considerable anxiety among the peach growers and doing a good many hundred dollars worth of damage. It is said that quite sound, hard peaches were punctured by the moths and that those approaching ripening were badly disfigured. By the end of the third day practically all of the moths had disappeared.
- Indiana J. J. Davis (September 14): The cotton leaf caterpillar moth has been reported injuring peaches as far north as Peru. The injury was especially conspicuous in the southern third of the State. The first reports were received September 6 and are continuing to come in at this date.
- E. L. Porter (September 21): Reports of injury to ripe peaches have been received from many points in Knox and Daviess Counties. The first report was on September 7.



- Illinois W. P. Flint (September 13): The adults of this insect have caused injury by feeding on peaches, grapes, and other fruit throughout the State. Larvae are very abundant on cotton which is being grown in the State, especially in several of the southern counties. The worms did not appear on the cotton plant until about September 4th.
- Kentucky B. R. Coad (September 11): Fulton County has suffered more or less damage from the cotton leafworm the present season, according to information from reliable sources. This is in addition to the counties of which you have been previously advised.
- Tennessee B. R. Coad (September 3): Reliable information shows serious damage has been occasioned by the leafworm in Lyer, Lake, and Madison Counties in west Tennessee. (September 11): Henry and Henderson Counties have suffered more or less damage from the cotton leafworm the present season, according to information from reliable sources.
- Alabama W. E. Hinds (August 28): Cotton worms have been reported recently from more than three-fourths of the counties in this State. We expect a wide spread of stripping especially in the northern two-thirds of the State during the last week of August and the first ten days or two weeks of September. I believe that up to this date over one million pounds of calcium arsenate has been used in this State for cotton worm control. (September 6): The second crop of the cotton leafworms is now reaching the half-grown stage in central and northern Alabama. This pest has been reported as far south as Mobile County but the damage is not as great in the South -- the cotton was too far along.
- B. R. Coad (September 11): Lawrence and Lamar Counties have suffered more or less damage from the cotton leafworm the present season, according to information from reliable sources.
- Mississippi B. R. Coad (September 11): The following counties have suffered more or less damage from the cotton leafworm the present season, according to information from reliable sources:
- | | | |
|------------|---------|-----------|
| Leake | Rankin | Issaquana |
| Scott | Itasca | Neshoba |
| Lauderdale | Choctaw | Benton |
| Lafayette | | |
- Missouri A. F. Satterthwaite (September 7): A large flight was occurring September 2, 5, and 6 at Webster Groves, attracted to lights and to imperfect fruit and sheltering in vegetation generally by day.
- L. Haseman (September 12): For southeastern Missouri the crop of worms of late August matured largely the last week. Moths have been attacking fruit at Columbia since September 1. Some serious damage to fruit. September 12 worms at Columbia were feeding on cotton nearly matured. Some pupa cases reported.



Arkansas

B. R. Coad (September 11): The following counties have suffered more or less damage from the cotton leafworm the present season, according to information from reliable sources:

Green	Cross	Jefferson	Saline
Pulaski	Independence	Jackson	Perry
Logan	Sebastian	Nevada	Ouachita
Union			

Oklahoma

B. R. Coad (September 12): C. E. Sanborn, Entomologist, Stillwater, under date of September 7, advises that the leafworm has begun to occur fairly generally in the southern part of the State. This is in addition to occurrences previously reported at Frederick, Tillman County, and McAlester, Pittsburg County.

New Mexico

R. Middlebrook (August 16): It is too early to estimate damage. Have appeared in enormous numbers. Local arsenical supplies are exhausted and they will probably do much more damage until more arsenicals are obtained. (August 23): No particular damage; may be a benefit, in Mesilla and Pecos Valleys. (September 13): The cotton leafworm arrived so late and did not increase in numbers so that what little harm they did was offset by the advantage gained by the stripping of the leaves which allowed the sun to reach the lower bolls and has caused some premature ripening which in this country is an advantage.

COTTON APHID (Aphis gossypii Glov.)

North Carolina

F. Sherman (September 6): I think that our field workers can give testimony that in some fields there has been more of this aphid on the dusted plants.

Georgia

W. F. Turner (September 5): In several fields the infestation is so heavy that opening cotton is being covered by honeydew and its consequent sooty mold. In a field of cotton, dusted only twice, the infestation is general. Couldn't find a leaf which didn't bear some aphids. Across the road is another field which was not dusted (planted in a peach orchard). Very few aphids in one end of this field. Further down the road, however, some poison blew across from the dusted field, as evidenced by the severe defoliation of the young peach trees. Here there are more aphids than in the portion which received no dust whatever, but not nearly as many as in the field (across the road) which received the dust directly.

G. A. Malorey (September 12): Aphid infestation is also reported from LaGrange.

COTTON BOLLWORM (Heliothis obsoleta Fab.)

Alabama

W. E. Hinds (August 26): The cotton bollworm has been extremely common and the frequent complaints show that it is doing more damage than the boll weevil.



Mississippi Geo. A. Maloney (September 12): The bollworm is reported as damaging crops in the vicinity of Coffeeville and Indianola.

COTTON RED SPIDER (Tetranychus telarius L.)

Georgia Geo. A. Maloney (September 12): The red spider is prevalent in some sections near Statesville.

Alabama W. E. Hinds (August 28): The cotton red spider was reported frequently during July but its appearance has been checked by heavy rains.

COTTON FLEA (Psallus seriatus Reut.)

Texas Bureau of Entomology Monthly News Letter No. 112: For the last two or three years there have been increasing complaints from southern Texas about the damage to cotton by the so-called cotton flea. The insect to which this name is applied is Psallus seriatus. The injury attributed to it is the blasting of the very young squares at the terminal bud of the plant. Some preliminary observations made this season throw strong doubt on whether this insect is responsible for the damage attributed to it. A number of plants caged in such a manner as to exclude the insect developed typical injury. The plants showing the excessive shedding of the very small squares also show an abnormal habit of growth. They become very tall and have few or no lateral branches and practically no fruit. All varietal characteristics are masked by this abnormal growth. This suggests that a large part of the injury charged to the insect may be due to climatic causes.

TOBACCO

RED-LEGGED LOCUST (Melanoplus femur-rubrum DeG.)

Connecticut B. H. Walden (September 14): A field of 3 acres of tobacco with the leaves badly riddled was reported from Rocky Hill. Probably from 40 to 60 per cent injured.

Kentucky A. C. Morgan (August 24): Damage to tobacco very great in scattered crops at Lexington.

RICE

STINK-BUGS (Pentatomidae)

Louisiana J. W. Ingram (August 27): Stink-bugs are now found throughout the section about Crowley on headed rice. They are causing quite a bit of damage by sucking the juice from the young rice grains.

FOREST AND SHADE - TREE INSECTS

MISCELLANEOUS FEEDERS

PERIODICAL CICADA (Tibicinia septendecim L.)

BROOD XIV (SEVENTEEN-YEAR RACE)

West Virginia W. E. Rumsey: This insect is reported from the following counties:

Berkeley	Hardy
Boone	McDowell
Cabell	Morgan
Grant	Pleasants
Jefferson	Pocahontas
Kanawha	Putman
Lincoln	Roane
Logan	Wayne
Hampshire	Wyoming

AN OYSTER-SHELL SCALE (Lepidosaphes sp.)

Illinois W. P. Flint (September 13): It is very abundant and destructive throughout the northern two-thirds of the State, as trees both in the city and country are being killed by this scale.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

New York C. R. Crosby (August 30): Specimens received from New York and Yonkers.

New Jersey R. B. Lott (September 15): Bagworms are unusually plentiful throughout the State this year, some trees being almost defoliated.

Pennsylvania S. W. Frost (September 13): The evergreen bagworm is exceedingly abundant this summer. It has been found on evergreens, quince, and apple.

Ohio H. A. Gossard (September 18): The basketworm or bagworms have not in previous years been recorded north of a line extending east and west through Columbus, about the center of the State. During this summer several reports have been received north of this line, some as far up as Cleveland. This insect was reported feeding on spruce at Marietta, September 4, and on cedar at Lancaster, August 28.

TWIG-GIRDLER (Oncidodes cingulatus Say)

Maryland J. A. Hyslop (September 23): The twig-girdler is again heavily pruning persimmon trees and doing slight damage to lindens. Not as serious as last year.

Nebraska M. H. Swenk (September 15): In Richardson County, near Humboldt, injury to elms by the twig-girdler during early September was reported.

BIRCH

BIRCH LEAF-SKELETONIZER (Bucculatrix canadensisella Chamb.)

- New Hampshire P. R. Lowry (September 11): Many birches are being skeletonized in Durham. Eruption has just begun. This insect is prevalent over the southern half of the State, but no information has been received as to the conditions in the northern half.
- Massachusetts A. I. Bourne (September 25): In coming across the State a short time ago, I found that in practically all of the northeastern sections, the birches were completely browned as a result of the feeding of these insects. Driving along the roads, I noticed every tree, even isolated trees, here and there in pastures, browned as if scorched by fire. Practically no green tissues were left to the foliage. Much of the same condition prevailed here in the Connecticut Valley, although the injury is not quite as severe as in the northeastern section of the State. It was interesting to note, in the higher levels around Athol, Gardner, etc., in northern Worcester County, that the injury was markedly less than in the lower areas immediately to the east and west. It was also striking that throughout Berkshire County much the same thing held true; the birches in that section, in the region around Pittsfield, Dalton, and Lenox, etc., showed very little evidence of the ravages of the skeletonizer.
- Connecticut W. E. Britton (September 24): Reported as being all over the State. About the same as last year.

CATALPA

CATALPA SPHINX (Geratoria catalpae Boisd.)

- Maryland J. A. Hyslop (September 4): Full grown larvae rapidly defoliating all common catalpa trees on my farm at Annapolis.
- Ohio H. A. Gossard (September 18): Records of damage by the catalpa sphinx continue to arrive. On August 21 specimens came from Lynchburg, and on September 10 from Barnesville.
- Indiana J. J. Davis (September 18): The catalpa sphinx caterpillar has been common and destructive in the southern two-thirds of the State, more so in the southern third.
- Illinois F. H. Benjamin (August 20): A tree in the City of Decatur, Macon County, practically defoliated. About 40 per cent of the larvae heavily parasitized by braconids.

ELM

EUROPEAN ELM SCALE (Cossypharia spuria Ménézes)

- New Mexico R. Middlebrock (September 13): The European elm scale is spreading in the northern half of this State.

ELM LEAF-BEETLE (Galerucella luteola Muell.)

Washington

A. L. Melander (September 17): The elm leaf-beetle is reported from Chehalis by Frank Dabney, who states that "many of the trees look pretty sick and undoubtedly will die if this pest is not curbed. All the green matter of the leaves is eaten." We knew of the occurrence of this species at Clarkston and about Vancouver, Wash., but this is the first report of it to the north.

PINE

PINE DEFOLIATER (Colcradia pandora Blake)

California

Monthly News Letter, Bureau of Entomology, No. 112: The pine defoliater, Colcradia pandora Blake, was discovered in the Chiquito Basin. The infestation is evidently very light, since no trees could be found that had been noticeably defoliated. The caterpillars were found on the ground under trees, where they had evidently been brought down by the smoke and gases from the control fires. This discovery is interesting, as the species has not before been reported for this locality. On July 14, Mr. Patterson arrived in the Yosemite National Park to study the present forest insect conditions in this Park. Bark-beetle infestations in the yellow pine, sugar pine, and Jeffrey pine have been very slight since the last examinations made in the Park in 1919. The pine defoliater was also found in the Park. Caterpillars were found feeding on the Jeffrey pine in the Little Yosemite and in the Snow Creek Basin. They were found on the yellow pine on the Yosemite Valley floor.

IMPORTED PINE SAWFLY (Diprion simile Hartig)

New York

C. R. Crosby (August 20): Found eating the needles off of long-leaf pine trees in yards— trees 6 years old, at White Plains; 150 to 200 caterpillars on one tree. Dr. Howard says that this is a new record. (Determination made by Mr. Rohwer.)

POPLAR

PACIFIC POPLAR GIRDLER (Agrilus nevadensis Horn.)

California

Monthly News Letter, Bureau of Entomology, No. 112: The tops of numerous poplars on an estate near Redwood City, Calif., have been killed by the Pacific flatheaded poplar girdler. The beetles which originally caused the trouble appear to have come from the native black cottonwoods along the banks of the creeks. Cutting out and burning the infested wood was recommended for control.

SPRUCE

SPRUCE BUDWORM (Cacoecia (Harmolozia) fumiferana Clem.)

GENERAL
STATEMENT

T. E. Snyder (September 13): This Bureau has recently investigated serious defoliations by the spruce budworm in northern and central Idaho and in the Yosemite National Park, in the Tower Falls and

Camp Roosevelt sections, Wyo. This destructive insect, which has devastated the spruce and balsam fir forests of Quebec, Ontario, New Brunswick, and Maine, is apparently distributed throughout the western States.

FIR

A BARK-BEETLE (Dryocoetes sp.)

Monthly News Letter, Bureau of Entomology, No. 112: An examination of the dying alpine fir in the Glacier National Park was made during the past month. The trees are being killed by a small bark-beetle, Dryocoetes sp. This attack occurred in the top and each year a lower portion of the bole is attacked. As many as four years are required to kill some of the larger trees. In many cases smaller trees are killed in one year. During the latter part of August a further examination will be made of this damage, with the purpose of recommending control measures of some sort, if possible.

MONTEREY CYPRESS BARK-BEETLE (Phloeosinus currens Hopk.)

California

Bureau of Entomology News Letter No. 112: At San Francisco a number of fine imported Chamaecyparis and Retinospora were affected with dying twigs, and the nurserymen were afraid that the entire trees would die. The trees are especially valuable at this time because the quarantine regulations now forbid their importation. The cause of the trouble was found to be the Monterey cypress bark-beetle (Phloeosinus currens Hopk.). The beetles bore into the small twigs, possibly for food, and this caused the twigs to break over and lose color. Usually not much real damage is done, but the trees look badly for awhile.

IPS

California

Monthly News Letter, Bureau of Entomology, No. 112: J. M. Miller reports that last season Ips was discovered on the Arrowhead Lake Project, Calif., and that submergence of the logs in water for several days was not an effective method of killing Ips beetles. This season some experiments are under way at North Fork to determine whether prolonged submergence will result in effective mortality. These tests, which include both Ips and Dendroctonus brevicornis Lec., are being carried out by Mr. Wagner. They have not been under way for a month and so far the experimenter has not succeeded in drowning any beetles. The brood of D. brevicornis came out of the water in fine condition after three weeks' submergence. They apparently become dormant while in the water and do not develop, but recover and resume activity within a few hours after they are brought into the air.

TULIP

TULIP SCALE (Touzevella lirioidendri Gmel.)

Indiana J. J. Davis (September 18): Numerous reports of the tulip scale on tulip trees or yellow poplar have been received. The reports have all come from the southern half of the State. Specimens from Terre Haute, received September 11, were hatching. It is apparently a little later than usual this year.

A SCARABAEID (Anomala marginata Fab.)

West Virginia Bureau of Entomology News Letter No. 112: In the vicinity of French Creek, W. Va., many small trees of black walnut, hickory, hazel, and chestnut were partially defoliated during July and August by beetles of Anomala marginata Fab. In some cases, especially on black walnut, the beetles were very abundant and young trees were stripped of their leaves.

BASSWOOD

BASSWOOD APHID (Therioaphis tiliae L.)

Wisconsin A. A. Granovsky (August 17): In Door County some injury was reported.

INSECTS ATTACKING GREENHOUSE

AND ORNAMENTAL PLANTS

MISCELLANEOUS FEEDERS

GARDEN FLEA-HOPPER (Halticus citri Ashm.)

Mississippi R. W. Harned (September 1): These insects were causing serious damage to petunias on property at Steens.

ASTER

BLACK BLISTER BEETLE (Epicauta pennsylvanica DeG.)

Connecticut G. M. Finley (August 26-September 1): One florist at Southington said that he hired a boy to pick the beetles off by hand and destroyed about 2,000. Many asters were badly eaten.

Indiana J. J. Davis (September 18): The black blister beetle was first reported this year injuring asters at Indianapolis.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thos.)

New York C. R. Crosby (August 7): Badly infested magnolia branches were received from Fredonia.

SPIRAEA

A SPIRAEA APHID (Aphis sp., det. Mason)

New York A. L. Pierstorff (July 14): This is seriously infesting spiraea in Monroe County.

SUNFLOWER

SUNFLOWER PEACOCK FLY (Straussia longipennis Vied.)

New Hampshire P. R. Lowry (August 24): A number of sunflowers had the stalks badly tunneled by this insect at Concord.

LAUREL

Ancmaia marginata Fab.

Connecticut W. E. Britton (September 24): Larvae identified by Dr. Böving. Material sent by owner, who sent correspondence to me. Attacking grass in lawn at Salisbury.

INSECTS ATTACKING MAN AND DOMESTIC
ANIMALS

MISCELLANEOUS

POBPER FLY (Saropogon dispar Coq.)

Texas Monthly Letter, U. S. Bureau of Entomology, No. 112: Specimens of a large robber fly, Saropogon dispar Coq., have been sent to Doctor Aldrich by David Hunter of San Antonio, Tex., with the information that they are killing many honeybees in his apiary. "Having weakened the colonies to a considerable extent before the cause was discovered. Over a thousand have been killed by knocking them over with a stick." No such numbers have ever been reported before, although in the literature of robber flies there are records of several species occasionally attacking bees. Saropogon dispar has been found hitherto only in Texas and Oklahoma, and no references to its habits are found in literature.

DEE LOUSE (Braula coeca Nitzsch)

Maryland E. F. Phillips (September 30): This species has been repeatedly introduced with imported queen bees and has disappeared when the queens were introduced into full colonies of bees, so that the impression has grown among American beekeepers that the species for some unknown reason can not become established in this country. In 1920 a specimen of this species was sent for identification from Carroll County, Md., Recently it has again been reported and E. L. Sechrist has visited the region. Braula is found in many of the colonies owned by one firm of beekeepers and is also found in other apiaries in the immediate locality. This species was reported as present in Mechanicsburg, Pennsylvania, in May of this year and it was then reported that they had been found four or five miles away a few years ago.

WHEEL BUG (Arilus cristatus L.)

Nebraska M. H. Swenk (September 15): It is interesting to note that during the present summer there have been a number of records of the occurrence of the wheel-bug, Arilus cristatus, in Nebraska.

CHINPSE PRAYING MANTIS (Paratenodera sinensis Sauss.)

New Jersey R. B. Lott. Specimens of this insect were taken at Trenton, New Brunswick, and Camden; it was also reported as common throughout the State.

Delaware C. O. Houghton (September, 1923): This species has now become pretty well established in this locality, and individuals are frequently seen. It was introduced by egg masses from southern New York, Jersey, and forwarded to us by F. L. O'Rourke.

MAN

CHIGGERS (*Trombicula tlalzahuatl* Murray)

Indiana J. J. Davis (September 15): Chiggers seem to be unusually abundant this year throughout the southern two-thirds of the State. They are not only abundant and annoying in the country but in the city lawns as well.

CATTLE

BLACK BLOW-FLY (*Phormia regina* Meig.)

Texas O. G. Babcock (September 12): Flies are just beginning to appear, as far as trap records show.

STABLE FLY (*Stomoxys calcitrans* L.)

General F. C. Bishopp (September 28): This insect has been seriously annoying to live stock in the northern two thirds of the grain belt. In some sections milk cows have been markedly cut in production and flesh, beef stock reduced in condition, and horses seriously annoyed. Some report flies so bad that fall plowing has been interfered with. There is evidence that they have played a part in the dissemination of anthrax in South Dakota.

Nebraska M. H. Swenk (August 31): The stable fly continued more than usually annoying during the month of August.

Texas O. G. Babcock (September 21): The stable fly has been increasing for the past two weeks at Sonora. It is not serious, however.

HORN FLY (*Haematobia irritans* L.)

General F. C. Bishopp (September 28): This fly has been more abundant than usual this summer in Colorado, Wyoming, and parts of the Dakotas. It is reported that in some sections the condition of grass fed cattle shipped from the range is markedly reduced as a result. Some claim a flesh condition out of 10 per cent.

Texas O. G. Babcock (September 20): For the past 10 days or two weeks the horn flies have been increasing considerably at Sonora with 300 to 500 per animal approximately. The increase has followed the cooler and moist weather.

SCREW WORM (*Cnyscerua macellaria* Fab.)

Texas O. G. Babcock (August 22-Sept. 5): Screw worm cases occur in about normal numbers, but are increasing. They are ^{not} as numerous as expected, on account of the weather apparently,

OX WARBLE (Hypoderma lineatum DeVill.)

Texas O. G. Babcock (September 10): Ox warbles are appearing earlier than usual. Damage is very slight at the present time. Cattle in general show infestations.

HORSES

RED-TAIL BOT-FLY (Gastrophilus haemorrhoidalis L.)

General F. C. Bishopp (September 28): This fly has occurred in about the usual abundance this summer in old infested territory, where it is recorded as one of the most troublesome pests of horses. There appears to be a considerable spread of the nose fly in the last several years. Circumstantial evidence strongly indicates that it is now present in northern Colorado and northern Wyoming, several hundred miles southwest of its range in 1918. The simple device consisting of a piece of rectangular belting or leather suspended beneath the lips, from the bit rings, as recommended by the Bureau of Entomology, is coming into general use.

NOSE BOT-FLY (Gastrophilus nasalis L.)

F. C. Bishopp (September 28): Actively attacking horses in northern Colorado, Wyoming and South Dakota and Minnesota. Extremely heavy infestation of eggs on horses in northern Colorado and southern and eastern Wyoming.

HORSE BOT-FLY (Gastrophilus intestinalis DeG.)

F. C. Bishopp (September 28): Active and heavy infestations of eggs on horses in northern Colorado and southern and eastern Wyoming.

POULTRY

EUROPEAN HEN FLEA (Ceratophyllus gallinae Schrank)

Maine P. R. Lowry (August 25): Very heavy infestations of what has been provisionally identified as this flea have been found in several chicken houses in this vicinity (Eliot, Maine).

GOATS

SUCKING GOAT LOUSE (Linognathus stenopsis Burm.)

Texas O. G. Babcock (September 21): Kids untreated last spring are suffering severely from the attacks of this louse.

INSECTS INFESTING HOUSES AND
PREMISES

A POWDER-POST BEETLE (Lyctus sp.)

Nebraska M. H. Swenk (August 31): A case of the serious injury of a barn built of cottonwood lumber, in Buffalo County, by the powder-post beetle came to our attention during the latter part of August.

BOOK LOUSE (Atropos divinatoria Mull.)

New York C. R. Crosby (August 16): At Darien a house is reported as badly infested.

AN ANT (Pogonomyrmex occidentalis Cross.)

Nebraska M. H. Swenk (September 15): In Frontier and Harlan Counties the mound-building prairie ant is reported as a destructive nuisance.

ARGENTINE ANT (Iridomyrmex humilis Mayr.)

Georgia Luther Brown (September 24): The Argentine ant has been reported from Brunswick and Waycross.

Louisiana T. H. Jones (September 4): The Argentine ant has been the cause of considerable complaint by householders in Baton Rouge during the past several days. It is usual for this ant to cause much annoyance about the house at this time of year, especially if the weather is wet.

EUROPEAN EARWIG (Forficula auricularia L.)

California E. O. Essig (September 5): The first report of this earwig in California has reached us, though it is known in Washington and Oregon. Residents of the infested area have known it since 1919. No damage is reported, although the insect is abundant.

FUSE-PLUG BORER (Dermestes frischi Kug.)

Minnesota A. G. Ruggles (September 29): An interesting case of a fuse-plug borer was called to my attention recently. The larvae of a dermestid, Dermestes frischi, was found eating the lead inside of the fuse plugs that connected up the different cables of a telephone company. The injury was not confined to one plug but has been quite general throughout the State.

INSECTS ATTACKING STORED PRODUCTS

GRANARY WEEVIL (Calandra granaria L.)

- New York C. R. Crosby (August 22): The weevils have practically destroyed my rye and are in my wheat granary.
- Nebraska M. H. Swenk (September 15): Reports of injury to stored grain pests are again becoming more common. These come from southern and eastern Nebraska.

DARK MEALWORM (Tenebrio obscurus Fab.)

- New Hampshire P. R. Lowry (July 25): Adults have been common in houses for the last week. There have been no reports of injury to cereals.
- Wisconsin A. A. Granovsky (August 26): This is a very common insect pest in most of the granaries in Door County. Damage varies considerably, according to amount of infestation.

CADELLE (Tenebroides mauritanicus L.)

- Nebraska M. H. Swenk (September 15): Reports of injury to stored wheat by stored grain pests are again becoming more common. These come from southern and eastern Nebraska.

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

- Nebraska M. H. Swenk (September 16): Reports of injury to stored grain pests are again becoming more common. These come from southern and eastern Nebraska.

LARDER BEETLE (Dermestes lardarius L.)

- Wisconsin A. A. Granovsky (August 26): The larder beetle was observed in practically all cheese factories visited, and it has been seen in private homes in Door County. The amount of damage is difficult to estimate.

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